

Office Action Summary

Application No.

09/170,961

Applicant(s)

Nguyen et al

Examiner

R. Bueker

Group Art Unit

1763

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 6-8-01 + 7-2-01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-30 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-30 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 15-23 and 26-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima (EP 045088), Sivaramakrishnan (EP 0602595) and Siegele (5,607,002) in view of Langford (The Making, Shaping and Treating of Steel) or Maruhashi (4,594,114). Nagashima (col. 4, line 36), Sivaramakrishnan (col. 3, lines 50-52 and col. 5, lines 53-54) and Siegele (col. 2, line 11 and col. 23, lines 40-60) all teach the use of stainless steel as a material of construction of semiconductor processing apparatus of the type contemplated by applicants. They do not discuss the amount of nickel in their stainless steel. Langford and Maruhashi make clear that stainless steel having little or no nickel is common and well known as corrosion resistant material. It would have been prima facie obvious to one skilled in the art to use a low nickel stainless steel in the apparatus of Nagashima, Sivaramakrishnan and Siegele, in the absence of a showing of unexpected results, commensurate in scope with the claims.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references cited above, taken in further view of Aya (4,340,697), Carpenter (4,084,440), Tillman, Goss (3,592,222), Benware (3,642,248), (3,635,436) and /or King (4,368,755). These added references teach that Vespel is a common and well known sealing material. For example, Aya teaches (col. 1, lines 13-18) that Vespel is known to have excellent mechanical, electrical and

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chemical properties, including chemical resistance. Tillman teaches (col. 3, lines 31-34) that Vespel is known to be generally functionally equivalent to Kel-F, which applicants teach (page 2, lines 20-23 and page 4, lines 18-22) to be used in the prior art for plug 68. Benware and Goss teach that Vespel is desirable for forming a seal. It would have been prima facie obvious to one skilled in the art to use Vespel as a seal ring in the apparatus of the primary references, or as a substitute for the prior art Kel-F plug discussed by applicants.

Claims 13-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the references cited above, taken in further view of Yamaguchi (5,520,858) and Stauffer (5,252,134). Yamaguchi (Fig. 1 and col. 2, line 10) and Stauffer (Figs. 2A and 2B and col. 7, lines 18-45) disclose gas bubblers and boilers for delivering reaction gases to semiconductor processing apparatus. It would have been prima facie obvious to use low nickel stainless steel as a material of construction of these apparatus also.

Claims 1-19 and 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "a container comprising a liquid phosphorous compound" is unclear because the container itself does not comprise the liquid. This language should be changed to "a container containing a liquid phosphorous compound". Claims 24-25 are vague and indefinite because they indicate Vespel is a polyamide when it actually is a polyimide.

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Claims 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to the Condensed Chemical dictionary, Vespel is a polyimide rather than a poly amide as described in applicants' specification and claimed in claims 24-25. It is also noted that the newly cited prior art patents indicate that Vespel and Kel-F are trademarks of Du Pont, not 3M as stated in applicants' specification.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 5,925,189. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims recite the use of stainless steel having a nickel content of less than 5%, which includes the present range of less than about 1%.

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Applicants' arguments have been considered but are not persuasive. As previously noted, to overcome a prima facie case of obviousness, a showing of unexpected results, commensurate in scope with the claims, must be presented. The present claims are not commensurate in scope with the alleged showing of unexpected results presented by applicants. The showing is limited to steel having a nickel content of 0.6% or less. The showing is also limited to the use of TEPO. None of the claims are so limited. Also, claim 20 recites "an injection orifice **for** connecting to a source of liquid TEPO" (emphasis added). Thus, contrary to applicants' arguments, claims 20-25 are not limited by a positive recitation of TEPO.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Richard Bueker

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